



Work Order Bid (ID)

3255 Keats Rd Memphis TN 38134 8426

WORK ORDER INFORMATION

Work Order Name: WO/1001651/1

Work Order Type: Weatherization

Audit Name: 1000616

CLIENT INFORMATION

Client ID: 1001651

Alt. Client ID: C1001670SA101

AGENCY INFORMATION

Agency: City of Memphis Division of
Housing and Community
Development

Address: 701 N Main St
Memphis TN 38107

Agency Phone: 1-901-576-7300

Agency Fax:

Email Address: paul.young@memphistn.gov

Company Name & License Number: _____

Contractor's Signature: _____

COMMENT

Single Family Home

Contractor to follow 2012 International Residential Code as adopted by the City of Memphis or Shelby County as applicable.

Home Built: 1973

1449 sq ft

Measure Seal Ducts

Components

Inspected

Comment Contractor to seal ductwork, meet or exceed target CFM25 listed below. During post-work inspection no more than 3 registers should have pressure pan readings greater than 1.0 Pascals. No single reading shall be greater than 3.0 Pascals. Best practice, all registers should read less than 1.0 Pascals.
 Total Duct Leakage test pre-weatherization: 710 CFM25
 Target Duct Sealing: 234 CFM25 (Total Leakage) or 156 CFM25 (Leakage to Outside)
 General Specifications:
 Liquid Mastic to be applied to seal all seams, joints, and connections in areas where duct sealing is performed to meet target. Areas where duct insulation must be removed must be re-insulated with R-8 insulation. Location(s) where boots meet drywall or subfloor to be caulked or taped with UL 181 Mastic tape. Sealing of the Return plenum shall be done using liquid Mastic. All return seams are to be sealed with mastic, and solid material (foam board, etc.) shall be used around edges to fill in any voids. To repair holes in duct, place flat sheet metal over opening and secure with sheet metal screws; seams to be sealed with Mastic paste.
 All work to be performed in accordance with Tennessee Housing Development Agency Standard Work Specifications (SWS)

#	Material/Labour	Description/Comment	Unit	Estimated			Actual		
				Qty	Unit Cost	Total	Qty	Unit Cost	Total
1	Miscellaneous Supplies	Duct Sealing	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Other Detail									
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Measure Sub Total						<input type="text"/>	Sub Total		<input type="text"/>

Field Notes:

Measure Infiltration Redctn

Components

Inspected

Comment

AIR SEALING
 Reduce air infiltration by 1796_ cfm. It is the responsibility of the contractor to locate areas of leakage in addition to areas detailed below. A blower door is recommended to find and seal air leaks. Contractor must meet or exceed the targeted reduction. No CHANGE ORDER will be issued for air sealing achieved below the targeted reduction #.
 "A_" Ring, Front_Door, Pre-Weatherization CFM50:4723_
 Target CFM50:_2927_
 Additional Areas to target:

#	Material/Labour	Description/Comment	Unit	Estimated			Actual			
				Qty	Unit Cost	Total	Qty	Unit Cost	Total	
1	Miscellaneous Supplies	Infiltration Reduction	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Other Detail										
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Measure Sub Total						<input type="text"/>	Sub Total			<input type="text"/>

Field Notes:

Comment

ATTIC INSULATION
 Attic areas to be insulated with an additional R-30, totaling R-38 overall. Main attic is accessed through utility room from the outside, Addition attic is accessed from a ceiling hatch in the 'TV Room'. Interior attic Hatch to be weather-stripped and insulated per SWS. Damming higher than the level of attic insulation required around attic access points as well as around mechanical chase left open to the attic. Per SWS, attic shall have: Rulers showing depth of insulation, complete attic information card permanently affixed at entry point, (1) empty bag of insulation left at attic entry, and clearances shall be maintained around combustibles.
 All work to be performed in accordance with Tennessee Housing Development Agency Standard Work Specifications (SWS).

#	Material/Labour	Description/Comment	Unit	Qty	Estimated		Actual		
					Unit Cost	Total	Qty	Unit Cost	Total
1	Insulation	Attic Insulation - Blown Fiberglass - R-29	SqFt	1828	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2	Labor	Attic Insulation - Blown Fiberglass - R-29	SqFt	1828	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Other Detail									
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Measure Sub Total						<input type="text"/>	Sub Total		<input type="text"/>

Field Notes:

Measure Kneewall Insulation

Components A2

Inspected

Comment Contractor to insulate _336 Sqfft of attic knee wall areas missing insulation with R-13 batt Fiberglass insulation. The stud spacing on knee walls is _" 9OC, contractor to verify in field. Installed fiberglass insulation is to be covered with a rigid barrier on the attic side.
All work to be performed in accordance with Tennessee Housing Development Agency Standard Work Specifications (SWS).

#	Material/Labour	Description/Comment	Unit	Qty	Estimated		Actual		
					Unit Cost	Total	Qty	Unit Cost	Total
1	Insulation	Kneewall Insulation - Fiberglass Batts - R-13	SqFt	336	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2	Labor	Kneewall Insulation - Fiberglass Batts - R-13	SqFt	336	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Other Detail

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Measure Sub Total **Sub Total**

Field Notes:

Measure DWH Tank Insulation

Components

Inspected

Comment Insulate the exterior of the water heater tank using a tank wrap with a minimum value of R-10 Fasten with zip ties and tape without compression.
All work to be performed in accordance with Tennessee Housing Development Agency Standard Work Specifications (SWS).Water

#	Material/Labour	Description/Comment	Unit	Qty	Estimated		Actual		
					Unit Cost	Total	Qty	Unit Cost	Total
1	Hot Water Equipment	DHW Tank Insulation	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2	Labor	DHW Tank Insulation	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Other Detail

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Measure Sub Total **Sub Total**

Field Notes:

Measure Storm Windows

Components W4

Inspected

Comment STORM WINDOWS
 Storm windows to be installed on windows listed below and marked on attached diagram. Contractor to remove old storm windows, caulk exterior trim of primary window, and install new storm window per SWS standards.
 Storm Window List:
 W4

#	Material/Labour	Description/Comment	Unit	Qty	Estimated		Actual			
					Unit Cost	Total	Qty	Unit Cost	Total	
1	Labor	Storm Window	SqFt	12	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
2	Other	Storm Window	Each Window	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
3	Windows	Storm Window	SqFt	12	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Other Detail										
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Measure Sub Total						<input type="text"/>	Sub Total			<input type="text"/>

Field Notes:

Measure A/C Tuneup

Components AC1

Inspected

Comment Tune-up and service shall be performed on the central A/C unit. In addition to standards tune-up items per SWS, contractor is to:
 All work to be performed in accordance with Tennessee Housing Development Agency Standard Work Specifications (SWS).

#	Material/Labour	Description/Comment	Unit	Qty	Estimated		Actual			
					Unit Cost	Total	Qty	Unit Cost	Total	
1	Cooling Equipment	A/C Tuneup	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
2	Labor	A/C Tuneup	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Other Detail										
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Measure Sub Total						<input type="text"/>	Sub Total			<input type="text"/>

Field Notes:

Measure High Eff Furnace

Components HS1

Inspected

Comment 19)H VAC Liheap Replacement
 Energy Star Rated HVAC SYSTEM /FURNACE to be installed.
 ACCA MANUAL J & MANUAL S documentation to be provided for approval prior to install.
 If new ductwork is installed, ACCA Manual D to be provided.
 If installing a package unit ductwork shall be covered by a four sided shroud.
 All work to be performed in accordance state and local codes, as well as with Tennessee Housing Development Agency Standard Work Specifications (SWS).

#	Material/Labour	Description/Comment	Unit	Qty	Estimated		Actual		
					Unit Cost	Total	Qty	Unit Cost	Total
1	Heating Equipment	High Eff. Furnace - 96 kBtu/h NG Existing, 37 - 51 kBtu/h NG Post	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2	Labor	High Eff. Furnace - 96 kBtu/h NG Existing, 37 - 51 kBtu/h NG Post	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Other Detail

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Measure Sub Total **Sub Total**

Field Notes:

Measure CO Monitor is Needed

Components

Inspected

Comment

Carbon Monoxide Detector
 Battery operated CO detection or warning equipment will be installed in accordance with ASHRAE62.2 and manufacturer specifications as required by the authority having jurisdiction. Houses should have carbon monoxide monitors installed near sleeping areas. Battery operated CO alarms should be UL-2075 or UL-2034 compliant.
 All work to be performed in accordance with Tennessee Housing Development Agency Standard Work Specifications (SWS).

#	Material/Labour	Description/Comment	Unit	Qty	Estimated		Actual			
					Unit Cost	Total	Qty	Unit Cost	Total	
1	Health and Safety Items	CO monitor	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
2	Labor	Labor	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Other Detail										
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Measure Sub Total							<input type="text"/>	Sub Total		<input type="text"/>

Field Notes:

Measure *Fix Improper Venting of Bathroom Exhaust Fan*

Components

Inspected

Comment BATH VENTING INSULATION
 Existing Kitchen fan is vented to the outside, but ducting is un-insulated.
 Contractor to insulate ducting in unconditioned space to a minimum of R-8 or equivalent.
 All work to be performed in accordance with Tennessee Housing Development Agency Standard Work Specifications (SWS).

#	Material/Labour	Description/Comment	Unit	Qty	Estimated		Actual			
					Unit Cost	Total	Qty	Unit Cost	Total	
1	Health and Safety Items	Fix Improper Venting of Bathroom Exhaust Fan	Each	2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
2	Labor	Labor	Each	2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Other Detail										
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Measure Sub Total						<input type="text"/>	Sub Total			<input type="text"/>

Field Notes:

Measure **Guttering Replacement (per Linear Foot)**

Components

Inspected

Comment All work to be performed in accordance with Tennessee Housing Development Agency Standard Work Specifications (SWS).

#	Material/Labour	Description/Comment	Unit	Qty	Estimated		Actual		
					Unit Cost	Total	Qty	Unit Cost	Total
1	Construction Materials/Hardware	Guttering Replacement (per Linear Foot)	Linear Foot	22	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2	Labor	Labor	Linear Foot	22	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Other Detail

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Measure Sub Total **Sub Total**

Field Notes:

Measure Install Bathroom Exhaust Fan

Components

Inspected

Comment

BATH EXHAUST FAN
 Contractor to install Bath Exhaust fan moving 50 CFM; fan must be ENERGY STAR compliant. Must have weatherproof termination fitting, a Backdraft damper installed at the fan housing or termination fitting have a low noise rating in accordance with SWS and local codes. Pricing to include all electrical for fan & switch. Exhaust ducting to be insulated to R-8. If removing existing fan with light or existing light to install new fan, install fan with light.
 BATH FAN installed shall include Smart Exhaust Bath Fan/Light Switch/Delay Timer/Ventilation Controller; fan shall meet continuous ventilation requirements per ASHRAE 62.2-2016.
 Required ventilation requirements: ___CFM for ___ minutes/Hour.
 All work to be performed in accordance with Tennessee Housing Development Agency Standard Work Specifications (SWS).

#	Material/Labour	Description/Comment	Unit	Qty	Estimated		Actual			
					Unit Cost	Total	Qty	Unit Cost	Total	
1	Health and Safety Items	Bathroom exhaust fan	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
2	Labor	Labor	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Other Detail										
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Measure Sub Total						<input type="text"/>	Sub Total			<input type="text"/>

Field Notes:

Measure Smoke Detector is Needed

Components

Inspected

Comment

SMOKE ALARMS
 Battery operated alarms will be installed in accordance with the 2012 IRC and manufacturer Specifications. Ensure proper installation. All homes should have UL-217 rated smoke Alarms installed in each bedroom and common area of home.
 All work to be performed in accordance with Tennessee Housing Development Agency Standard Work Specifications (SWS). Water Tank Insulation.

#	Material/Labour	Description/Comment	Unit	Estimated			Actual		
				Qty	Unit Cost	Total	Qty	Unit Cost	Total
1	Health and Safety Items	Smoke detector	Each	4	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2	Labor	Labor	Each	4	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Other Detail									
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Measure Sub Total						<input type="text"/>	Sub Total		<input type="text"/>

Field Notes:

Work Ordere Grand Total:	<input type="text"/>	Grand Total:	<input type="text"/>
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